

Chapter 12.4

Asbestos Control Regulations

1. Introduction

Medical evidence linking asbestos to chronic disease has led to efforts to control or reduce asbestos exposure, particularly in environmental and occupational settings where exposure can be prolonged. Both OSHA and the EPA have published regulations concerning asbestos exposure. State regulatory agencies, TDSHS, and the Texas Commission on Environmental Quality (TCEQ) have become involved in administering certain aspects of the regulations. Failure to follow regulations and apply adequate standards of care in asbestos-related activities may result in unnecessary risk to employees and building occupants.

2. Occupational Safety and Health Administration

OSHA has issued two separate asbestos standards that cover the vastly different conditions in general industry and construction workplaces. These standards were established in the Code of Federal Regulations, Title 29, Part 1910, Section 1001 for general industry (29 CFR 1910.1001) and in the Code of Federal Regulations, Title 29, Part 1926, Section 1101 for the construction industry (29 CFR 1926.1101). These standards establish PELs and numerous requirements that employers need to meet. You shall use these standards in conjunction with Part 12 to ensure compliance with federal regulations. OSHA regulations cover the following:

- a. Both regulations establish requirements for:
 1. Methods of compliance
 2. PPE
 3. Employee monitoring
 4. Medical surveillance
 5. Alerting employees of hazards
 6. Regulated areas
 7. Housekeeping procedures
 8. Training
 9. Recordkeeping
- b. The OSHA PEL for asbestos exposure is 0.1 f/cc of air as an 8-hour TWA; OSHA also has a 30-minute TWA excursion limit of 1.0 f/cc. These limits apply to workers performing operations involving asbestos products and to construction workers performing abatement, demolition, or renovation involving ACM.
- c. Additionally, 29 CFR 1926.1101 defines the classes of asbestos-related construction work. These classes are:

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1. **Class I asbestos work:** Activities involving the removal of thermal system insulation (TSI) or surfacing material that has been identified as ACM or is presumed to be ACM (PACM).

Note: From 29 CFR 1926.1101(b) – surfacing material means material that is sprayed, troweled on, or otherwise applied to surfaces of ceilings, structural members, and other surfaces for fireproofing, acoustical, and other purposes.

2. **Class II asbestos work:** Activities involving the removal of ACM that is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard systems, floor tiles and sheeting, ceiling tiles, roofing and siding shingles, and construction mastics.

Note: From 29 CFR 1926.1101(a)(8) – the OSHA Construction Industry Standard does not apply to asbestos-containing asphalt roof coatings, cements, and mastics. The OSHA Construction Industry Standard instead applies to asbestos-containing shingles and roofing paper.

3. **Class III asbestos work:** Repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed.

Note: From 29 CFR 1926.1101(b) – disturbance means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount that can be contained in one standard-size glove bag or waste bag, to access a building component. The amount of ACM or PACM disturbed shall never exceed that which can be contained in one glove bag or waste bag, not to exceed 60 inches in length and width.

4. **Class IV asbestos work:** Maintenance and custodial activities during which employees contact but do not disturb ACM and activities to clean up dust, waste, and debris from Class I, II, and III activities.
- d. In addition to the asbestos standards, OSHA has also issued other standards related to specific safe work practices. Most notable of these is 29 CFR 1910.134, “Respiratory Protection.” Both 29 CFR 1910.1001 and 29 CFR 1926.1101 reference this standard. Any employer requiring workers to wear respiratory protection shall meet the requirements of 29 CFR 1910.134. This includes a written Respiratory Protection Program plan reviewed by the NASA-JSC Occupational Health Officer or his/her designated representative.

3. Environmental Protection Agency

Two sets of EPA regulations affect activities at JSC involving ACM:

- a. In the first, the EPA regulates asbestos as a hazardous pollutant under the Clean Air Act. The standard, NESHAP, was established in the Code of Federal Regulations, Title 40,

Chapter 1, Subchapter C, Part 61, Subpart M, paragraphs 140 through 157 (40 CFR 61 Parts 140–157). Both building owners and asbestos-removal operators are responsible for complying with the standard. The standard:

1. Requires that a thorough inspection for ACM be performed in building and facilities to be demolished or renovated.
2. Requires notification to the EPA when a building or facility, or a portion thereof, is to be demolished regardless of the presence or lack of identified ACM.
3. Requires that the EPA be notified when a building that contains friable or potentially friable ACM is to be renovated if the amount of the material disturbed meets notification limits.
4. Sets standards for wet removal and treatment of asbestos materials during building demolition and renovation.
5. Prohibits the spray application of materials that contain greater than 1% asbestos.
6. Prohibits the use of molded and friable or wet-applied asbestos materials.
7. Sets procedures for air cleaning and for inactive and active waste disposal sites.
8. Prohibits visible emissions to the outside.
9. Specifies certain disposal procedures.

This EPA regulation focuses on the removal of ACM during demolition and renovation activities in buildings, emission of asbestos fibers, and disposal of asbestos waste. The standards are related to environmental controls, not to worker protection. This EPA standard, which governs emission of asbestos fibers into the atmosphere, stipulates that there shall be no visible emissions from any asbestos-using operation, waste disposal site, or sanitary landfill. It also requires a variety of dust-suppressing procedures. Special procedures relating to roof removal may be found in 40 CFR 61, Appendix A—Interpretive Rule Governing Roof Removal Operations.

- b. The second set of EPA regulations is “Asbestos-containing Materials in Schools” (40 CFR 763), which was promulgated under the Toxic Substances Control Act. While this regulation was aimed primarily at ACM in schools, it has become a standard for accepted practice. This regulation also states that response actions are completed when clearance air samples have fiber concentrations of ≤ 0.01 f/cc of air. Changes to this regulation in 1994 modified training requirements and added applicability to public and commercial buildings, including government-owned buildings. The OSHA regulations refer to 40 CFR 763 in some of their criteria, especially for training requirements.

4. Texas Department of State Health Services

Texas has enacted an asbestos contractor licensing law that can be found in the Texas Administrative Code (TAC). You can find these requirements in Title 25, Part 1, Chapter 295, paragraphs 31 through 73 (25 TAC 295.31–295.73). Any contractor performing asbestos-related work in public buildings shall have appropriately trained and licensed

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personnel planning, supervising, and conducting the work. The TDSHS also has primary responsibility within the state for enforcement of EPA NESHAP regulations under authority delegated by the EPA.

5. Texas Commission on Environmental Quality

The TCEQ has established requirements for the disposal of asbestos waste. Texas has designated ACM as a Class I waste. You can find this designation in Title 30, Part 1, Chapter 335, subchapter R, paragraphs 501 through 521 (30 TAC 335.501–335.521). Dispose of any ACM waste generated at JSC per all Texas requirements found in 30 TAC 335, “Industrial Solid Waste and Municipal Solid Waste.”

6. Harris County

The Harris County Health and Environmental Department has issued no asbestos control regulations.

7. City of Houston

The City of Houston has issued no asbestos control regulations that apply to activities on federal property.

8. NASA Policy

NASA Headquarters, in a February 18, 1983 letter on “Hazard Assessment and Abatement in NASA Buildings,” summarized its position with respect to the presence of asbestos in NASA facilities:

- a. Asbestos SAI shall not be removed from surfaces of NASA buildings simply because of its presence, neither should other abatement techniques be implemented.
- b. All areas containing asbestos SAI shall be visually inspected at least annually for damage and signs of deterioration.
- c. Air sampling and analysis for airborne fibers shall be performed annually or more frequently, as warranted, in areas containing asbestos SAI.
- d. Where hazard assessments reveal asbestos SAI to be in an unacceptable condition so that the health of building occupants may be threatened, corrective actions shall be taken promptly to eliminate or control the source of contamination.
- e. Accurate and up-to-date records shall be maintained of all asbestos identification, work area surveillance, and abatement activities.
- f. Employees shall have access to these records per OSHA requirements.
- g. Access to medical surveillance records shall follow NASA Privacy Regulations on Medical Records.

9. JSC Policy

JSC's policy is to meet or exceed all of the above requirements. Part 12 and federal, state, and local regulations form the basis of the requirements for all asbestos-related activities undertaken at JSC. JSC expects any organization or contractor performing asbestos-related work at the center to also meet or exceed these same requirements. To ensure familiarity with the requirements, JSC requires that any organization, activity, or contractor performing asbestos-related work at the center have in their possession copies of Part 12 of this handbook as well as the following standards:

- a. 29 CFR 1910.1001
- b. 29 CFR 1926.1101
- c. 29 CFR 1910.134
- d. 40 CFR 61.140– 61.157
- e. 40 CFR 763